

A Gardening Metaphor: A Framework for Closing Racial Achievement Gaps in America

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The overarching purpose of this article is to introduce *A Gardening Metaphor* (AGM) as an evolving framework for accelerating the closure of racial achievement gaps in America. Toward this end, we provide: (a) an examination the racial disparities in education that are disproportionately experienced by Black children; (b) a rationale for why racial achievement gaps must be closed; (c) an introduction to components of AGM; and (d) discussion of AGM gap closing potential through case study with implication for research and practice.

Overview of the Educational Experiences of Black Youth

On average, African American youth in American public schools are disproportionately disadvantaged in every indicator of academic success. These youth experience lower performance in test scores and grades, high dropout rates, low graduation rates, and low enrolment in post-secondary education (Abulkadiroglu et al., 2014; Cokley et al., 2012; Ford & Moore, 2013; Gaddis & Lauen, 2014; Hartney & Flavin, 2013; Jencks & Phillips, 1998; Kao & Thompson, 2003; NAEP, 2013; Noguera, 2003, 2001). A critical analysis of the resources, processes, opportunities for learning reveals that African American youth experience: lower teacher expectations, lower ability tracks (Burris et al., 2008; Flores, 2007; Hanushek & Rivkin, 2009; Kelly, 2009; McKown & Weinstein, 2008), over representation in special education placement (Ahram, Fergus, & Noguera, 2011; Codrington, & Fairchild, 2012; Quintana, 2012; Zion & Blanchett, 2011), and receive exclusionary school discipline practices more than other racial groups (Finn & Servoss, 2015; Losen et al., 2014; Carter et al., 2014). Furthermore, Black children often attend high poverty and high minority schools with the least experienced teachers, highest teacher mobility, and highest percentage of teachers teaching in non-field related (Abdul-Alim, 2012; Harper, 2015; Knaus, 2007; Orfield et al, 2012), and experience school segregation (Card & Rothstein, 2007; Condrón et al., 2013; Diamond, 2006; Noguera, 2001; Rushing, 2015). The science, technology, engineering, and math (STEM)

related fields show a more devastating picture of African American children underdeveloped skills and potential (Brown et al., 2016; Martin, 2012) more so, for males, and in urban education contexts (Ford & Moore, 2013; Levin et al., 2007; Noguera, 2003). These indicators of the racial disparities in the American education system are better conceptualized as opportunity and resource gaps, teacher expectations gap, and educational debts, suggesting reframing of the experiences of Black children from achievement gaps to reflect the more broader and systemic inequities inherent in the processes characterizing Black children's education (Ford & Moore, 2013; Ladson-Billings, 2006; Milner, 2012).

Figures 1 and 2 provide a longitudinal summary of trends in racial achievement gaps in math and reading on the National Assessment of Educational Progress (NAEP). These figures show that opportunities to improve Black children's achievement in math and reading have been minimal effect at best, if not stalled altogether. Specifically, in reading, it appears that significant gains in achievement were made between 1973 and 1979 at the secondary school level, in particular, before it started to decline in 1980 with steep decline recorded in 1988. After 1988, gains in reading have remained relatively flat with minor fluctuations to date. While the chart for math seems to follow a similar trend, there seems to be more of a reversing trend today than before. Empirical research supports the evidence that Black students made significant progress in reading and math with implications for racial gaps closure, although gaps were never closed, between 1971 and 1990 (Ferguson, 2007; Kao & Thompson, 2003; Lee, 2006; Phillips et al., 1998). By the late 1980s, Black children's recorded 0.6 to 0.7 standard deviation in test scores higher than gains made by Whites at the same time (Phillips et al., 1998). If this progress had been sustained, it could have significantly reduced the achievement gaps. Today, Blacks are significantly at the bottom of the achievement ladder (CRSP, 2015; NAEP, 2013; Quintana, 2012), and the gap appears persistent (Erickson, 2016).

A more recent analysis of the NEAP data by Hanushek (2016) reveals that when the Coleman Report sparked national attention in 1965, the average Black 12th grader was on the 13th percentile of White students' scores nationally. Currently, Hanushek (2016) finds that Black-White gap in math has shrunk by only 0.2 standard deviation, placing the average Black 12th grader on the 19th percentile of White students' distribution. In reading, where progress is slightly larger than in math, the Black 12th grader is on the 22nd percentile of the distribution. Shocked by his findings, Hanushek asserts; "After nearly a half century of supposed progress in race relations within the United States, the modest improvements in achievement gaps since 1965 can only be called a national embarrassment" (p.21). He predicts that if efforts to close the achievement gaps continue at the same rate in the future, it will be approximately two and a half centuries before the Black-White math gap closes, and over one and a half centuries to close reading gap.

Thus, the substantial and persistent nature of the gaps suggest that despite millions of dollars spent annually on 'best practices' or educational reforms, most have failed to close achievement gaps associated with race and class (Lee & Reeves, 2012; Levin et al., 2007; Viteritti, 2012). For example, Levin et al. (2007) conducted a comprehensive review of interventions for improving Black's, males in particular, high school graduation rate. They found that, only five—Perry preschool program, the Chicago child-parent centers, first things first, teacher salary increase, and class size reduction—had some modest increase in Black male's high school graduation. Other studies have noted similar findings (Dobbie & Fryer, 2013; Teasley et al., 2016; Viteritti, 2012) suggesting that educational reforms and practices have relatively small to moderate effect on Black students' education with implications for gaps closure. As noted (Hanushek, 2016), we argue that without dedicated efforts to identify and specify what education for Black children means, and how to realize it (Martin, 2012;

Perry et al., 2003), effective policies and practices for equity-based excellence that close racial achievement gaps will remain elusive for very long time.

Building National Case for Closing Racial Achievement Gaps

The underachievement of Black youth in education have serious national implications. We examine five of those implications, suggesting an urgent need to develop dedicated policies and practices that close racial achievement gaps.

Civil heritage: *We hold these truths to be self-evident, that all men are created equal; that they are endowed by their Creator with inherent and inalienable rights; that among these are life, liberty, and the pursuit of happiness endows them...* (Declaration of Independence as originally written by Thomas Jefferson, 1776; Taylor et al., in press). However, there can be little ‘pursuit of happiness’ as long as doors of educational opportunities snap close as doors to prisons open wide for Black youth (Neal & Rick, 2014). Since ‘the pursuit of happiness’ is constructed as an inalienable right of all citizens, eliminating the multiple gaps that give birth to the achievement gaps (Milner, 2012) for this most powerful and wealthy nation which pleads the case for democracy and freedom around the world because those gaps bring pain and undermine happiness in the pursuit of education through the punitive and stifling ways by which many Black children are to learn (Boykin, 1984; Hale, 1982).

Religious heritage: To many Americans, the Judeo-Christian tradition which affirms that man was made in the likeness and image of his or her Creator is on its face inconsistent with racial achievement gaps documented in the previous section. They reflect “moral issue; a challenge to fairness or justice in a society in which education is instrumental for “leveling the playing field” (Levin et al., 2007, p.700), and deprive many African Americans of the opportunity to give full expression to their humanity (Aidman & Malerba, 2015; Brittain & Kozlak, 2007). To the extent that the Judeo-Christian ethic is affirmed, confronting racial

achievement gaps is the right thing to do for this nation, which considers itself a moral beacon to the world.

Communal costs: Lower educational attainment is associated with diminished lifetime earnings and career options, greater emotional and physical stress and illness, and higher risks of teen pregnancy, welfare participation, child abuse and neglect, gang involvement, and drug and alcohol abuse (Gaddis & Lauen, 2014; Furgerson, 2007; Cottrel, 2015; Taylor & Kouyatè, 2003). Thus, the quality of life of Black students, their families and communities depends on the timely closure of racial achievement gaps. Additionally, in a racially oppressive world, education remains the powerful weapon of struggle for producing leaders and agents of change for liberation and empowerment (Hale, 1982; Perry et al., 2003; Martin, 2009). Therefore, the disparities simultaneously signify the destruction of leadership abilities and potential agents of change in the Black community, and the remaking and reinforcement of oppression (Erickson, 2016; Hale, 1982). Responding to these costs thus, requires confronting racial disparities in education.

Economic costs: It has been found that a high school dropout earns about \$260,000 less over a lifetime and pays about \$60,000 less in taxes than high school graduate pays. The annual losses exceed \$50 billion in federal and state income taxes for all 23,000,000 U.S. high school dropouts ages 18-67 (Levine, 2005). A year increase in average years of school for dropouts would reduce murder and assault by almost 30%, motor vehicle theft by 20%, arson by 13%, and burglary and larceny by about 6%. Increasing the high school completion rate by just 1 percent for all men ages 20-60 would save the U.S. up to \$1.4 billion per year to reduce crime cost. With 45 percent national dropout rate for Blacks (41 percent females, 52 percent males) relative to the 22 percent dropout rate for whites (21 percent females, 26 percent males) (Greene & Winters, 2006; Greene, Winters & Swanson 2005). The failure to achieve educational justice is costly to the entire nation

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and even more so to the Black community. While it may cost the nation \$90, 700 for effective intervention that would see the average Black male through high school, the public stands to benefit from \$265, 700 per new Black male graduate (Levin, et al., 2007). When Black males' high school graduates are equated with their White males' counterparts, they yield public savings of about \$3.98 billion for each age cohort (Levin, et al., 2007). From the benefit cost-analysis from the economic standpoint, closing racial achievement gaps is economically wise thing to do.

Relatedly, societies with more advanced skills have potential to grow faster and adjust well in the 21st century (Acemoglu & Angrist, 2000; Ferguson, 2014). Nationally, the percentage of non-white is increasing as the percentage of white is decreasing (Ferguson, 2014). Failure to address achievement disparities in the growing population of non-whites will cost the nation in terms of its competitive advantage and standing in the international market and education (Darling-Hammond, 2007).

A Gardening Metaphor: A Framework for Closing Racial Achievement Gaps

A Gardening Metaphor (AGM) is among our first formal efforts to identify factors that may be important to the attainment of equity, justice and excellent education for African American students. Foregrounded in grounded and emergent theory (Jaccard & Jacoby, 2010), AGM is guided by: 1) failure of policies and practices to explicitly identify and respond to the educational needs of African American children (Erickson, 2016; Berends et al., 2008; Codrington & Fairchild, 2012; Hartney & Flavin, 2013; Viteritti, 2012); 2) the amplification of the deficit narratives that define Black children in terms of dangers and risks in their neighborhoods—risks that are actually a manifestation of structural design—(Erickson, 2016; Harper, 2015; Reed & Swaminathan, 2014; Schaefer & Rivera, 2016); 3) the resources in the urban education classroom and its environs (Harper, 2015; Martin, 2012; McCullough & Ryan, 2014; Noguera, 2003; Schaefer & Rivera, 2016; Walker, 2000); and 4) the success stories of

achievement by students, including those living in at risk contexts, in even unjust educational contexts (Berends et al., 2008; Erickson, 2016; Martin, 2009; Perry et al., 2003; Noguera, 2003; Walker, 2000).

We define urban education according to Milner's (2012) framework as urban intensive, urban emerging, and urban characteristics depending on the density and the population that surround a given school context. Underlying these conceptions is the understanding that those who live, and attend school in urban context may be highly diversified in their experiences, needs, and the sociocultural processes that embed them. Therefore, to understand, identify, and nurture the intellectual, talents, and resources of students in urban education classroom require an intimate knowledge of both children's unique and generic experiences and needs (Delpit, 2003; Duncan-Andrade, 2009). AGM stipulates that despite the seemingly unjust environments, with dedicated efforts rooted in genuine care, potential exists to uncover, and develop the resources inherent in African American children and their contexts, those in urban education in particular, with implications for racial gaps in learning opportunities and outcomes. Our eventual goal, however, is to work toward a general science of acceleration that we expect will be applicable to students of any other race, ethnicity, or gender. In the current application, we are careful not to overstate the merits of AGM as it is not yet a scientific theory.

At its core, a theory identifies the universe of constructs necessary to explain the phenomenon under investigation, specifies interrelationships among identified constructs, and methods for mapping them (Jaccard & Jacoby, 2010; McKown, 2013). AGM offers a provisional set of six constructs that we believe can be applied to close racial achievement gaps: 1. Soil (Antecedents/Students); 2. Seed (Curriculum and Pedagogy); 3. Root (Culture); 4. Environment (Context); 5. Gardner (Teacher); and 6. Gardner Support (Training and Administration). We believe that appropriation of these constructs has potential to transform familiar educational

structures and processes to achieve and maintain justice. Here we introduce the six provisional constructs of AGM to help uncover the resources in the urban contexts and nurture them to achieve justice in education.

Soil (Antecedents)

A direct observation of a gardener shows that aeration and management of soil toxicity are critical to a hardened soil prior to seedling in order to have a glorious bloom. Here we suggest that the soil symbolically represents African American students in the urban classroom contexts whose intellectual abilities may have been unattended to or under stimulated (Delpit, 2003; Hilliard III-Baffour Amankwatia II, 2006; King, Akua & Russell, 2013). Students may be hardened against learning by internalized stereotypes that suggest exemplary achievement is more of a white than Black (Taylor & Kouyatè, 2003; Jones, 2000; Ogbu, 2004) or impaired by evaluation anxiety that undermines performance (Steele, 1997). Then there are soil toxins such as discrimination, that impede academic performance (King, Akua & Russell, 2013; Neblett, 2006). Guided by the soil metaphor, to help students achieve, and close racial achievement gaps, it is important to thoroughly assess Black children in ways that take into account the complexities they are nested in to hear their voices to understand them and their educational needs in order to respond accordingly (Davis et al., 2014; Delpit, 2003; García Coll et al., 1996; Wallace & Chhuon, 2014). To thoroughly assess and identify Black children's needs, a genuine caring, supportive, and respective relationship across their developmental contexts—family, school, and communities— are critical (Cholewa et al., 2012; Davis et al., 2014; Duncan-Andrade, 2009; Smalls, 2010; Wallace & Chhuon, 2014).

African American children are relational (Hale, 1982), and when they feel connected, loved and supported, they are able to reflect, compose, and share stories about themselves in ways that allow them and others—parents, teachers and adults in their lives— to identify their

needs and resources to support both teaching and learning (Cholewa et al., 2012; Parson, 2008; Varelas et al., 2013). AGM posits that adequate assessment and preparation of the soil is indispensable to a glorious bloom. It thus suggests that assessing and understanding students and their socio cultural, economic, spiritual, and emotional backgrounds are key to effective teaching and learning because children feel loved and heard, which allow teachers and adults to identify children's need in order to specify responsive instructional strategies (Davis et al., 2014; Duncan-Andrade, 2009; Wallace & Chhuon, 2014). We therefore recommend teachers of African American children to first assess students to understand their unique needs to inform their instructional practices. Given the importance of the quality of relationship in promoting trust and openness among African American children (Davis et al., 2014; Duncan-Andrade, 2009; Wallace & Chhuon, 2014), we additionally recommend teachers to develop authentic caring and supportive relationship with their students. Particularly instructive here is the relationship built on love and trust that earn educators and adults the right to demand commitment from students described under what Duncan-Andrade (2009) called "Socratic hope" (p. 187-189).

Seed (Curriculum and Pedagogy)

The next construct identified under AGM is curriculum and pedagogy, metaphorically described as a seed. With the belief in seed germination and plant growth, the gardener selects appropriate type of seed, and prepare it before planting it in soil at appropriate depth (Baskin & Baskin, 2004). AGM posits the need to view student as capable to meet the demand for rigor, and introduce curriculum that challenges them in a meaningful way (Duncan-Andrade, 2009). In supporting Black children to meet the demands of rigor, AGM content that consistent with the Duncan-Andrade (2009) description of critical hope, educators must distinguish contextual factors that can influence students' learning opportunities from their learning abilities, and use the curriculum to help support and nurture them to become change agents (Delpit, 2003; King,

Akua & Russel, 2013). AGM argues that following a fair assessment and understanding of African American students and their learning needs, potential exists to identify and specify how to introduce rigorous curriculum to students for maximum receptivity or engagement (Cholewa et al., 2012; Delpit, 2003; Duncan-Andrade, 2009; Parson, 2008). Teachers may employ a variety of ways including paring students in a group and fostering relations, challenging students to persist, holding higher expectations, normalizing mistakes and stressing on efforts, and communicating students' success as important to both self and community (Cholewa et al., 2012; Delpit, 2003; Seiler & Elmesky, 2007).

We recommend that for curriculum to increase African American students' achievement in ways that evidence educational justice, it is important that the curriculum is 'rigorous and relevant to them and their learning needs (Davis et al., 2014). Additionally, the rigorous curriculum should be delivered in supportive contexts, and promote communal rather than individualistic values (Davis et al., 2014; King, Akua & Russel, 2013; Seiler & Elmesky, 2007). A curriculum with these features has potential to provide opportunities for activating existing competences such as those in songs, dance, games, proverbs, biographies, rap, hip hop, icons, and literacy (Hilliard III-Baffour Amankwatia II, 2006; Morrell & Duncan-Andrade, 2005; Taylor & Kouyatè, 2003) to serve as a springboard for acquiring new skills (Parsons, 2008; Varelas, Martin, & Kane, 2013). Education is more relevant to African American children when it offers them the opportunity for liberation and empowerment (Delpit, 2003; Martin, 2009). AGM therefore, contends that justice oriented education should be contextually driven (Reed & Swaminathan, 2014), guided by meaningful and intentional selection, and design of the curriculum with specific objectives of liberating and empowering a group against domination and oppression (Hale, 1982; King, Akua & Russell, 2013; Martin, 2009). Because of the complexity of 'seeding', we thought it might be

helpful to illustrate one approach to fostering students' understanding of, and engagement in rigorous curriculum (Taylor, 2006).

Probing the relationship between addition and multiplication

1. *Objective learning: What is 2×3 ?*
2. *Active learning: Jason, what is your favorite pair of socks at home? Let us say that Jason puts \$3.00 in one favorite sock and \$3.00 in the other. Who can show me how to use multiplication to determine how much money Jason has?*
3. *Meaningful learning. Sheba has 3 DVDs and Tanisha has 3 DVDs. Who can show me two ways of figuring out how many DVDs they have together?*
4. *Mindful learning. Who can explain the relationship between $3 + 3$ and 2×3 ? Yes, that's right, Akela. Teacher then writes on the board and explains the expression $(3 + 3) = (2 \times 3)$ which is another way of writing Akela's answer. Then teacher writes $(3 + 3 + 3) = (? \times 3)$ and gives students a moment to figure out the value of '?'. When students understand the nature of '?', teacher assigns teams to make up 3 problems using sets of 4, 5, and 6 and share their problems and answers to the class with explanations.*

Similar probing can be applied in reading and science classrooms to engage students for active learning that is mindful of their cultural and lived experiences in ways that objectively impact them and their communities meaningfully (Martin, 2009). In the application of these practices, teachers are reminded of the importance of calling not only on students eager to respond, but also on students who seemed uninterested in responding, but doing so with respect, care and concern for the student's growth (Cholewa et al., 2012; Duncan-Andrade, 2009).

Root (Culture)

The root metaphorically represents Black racial and cultural identity. Observation of any fruitful plant will reveal that the root system is critical to nurturing and protection of the plant.

Similarly, linking Black children's education and the utility value of education to their cultural and social identities are critical to students' engagement, performance and achievement (King, Akua & Russell, 2013; Oyserman, Bybee, & Terry, 2006; Oyserman, Gant, & Ager, 1995). AGM argues that the self is a combination of one's personality and group or social identity (Cross, 1991; Oyserman, Bybee, & Terry, 2006). However, for most Black children who live in families, and attend schools, in highly poor and segregated neighborhoods, there may be limited resources and opportunities for them to envision positive images connected to their cultural and racial identities to guide them to achieve academically (Oyserman et al., 2006; Pattillo, 2013). There is therefore the need to intentionally foster positive sense of self and help children develop strategies that initiate and sustain self-regulatory behaviors such as persistence, self-esteem, learning orientation, self-reliance, and interpersonal skills to foster academic success (Brown et al., 2016; Larson, 2011; Neff et al., 2005; Oyserman et al., 2006). As noted (Oyserman et al., 2006), for Black children to excel academically with implications for racial achievement gap, we recommend that besides rigorous curriculum, teachers, families, and communities collaboratively expose children to an accomplished African American in contemporary or historical times—either real or photographs—whose achievement children envision in their adult lives. Next, engage children reflectively, on experiences of the identified figures, and normalize failure or mistakes while reinforcing the possibility of achieving their imagined future through engagement in learning strategies—hours spent on homework, seeking help, attending classes, and turning in assignment—and how to avoid negative and disruptive behaviors (Brown et al., 2016; Oyserman et al., 2006).

We believe that the connection to, and with, the social and cultural identity can convey the meaning of education as the powerful tool for both personal and community liberation, empowerment, and transformation (Delpit, 2003; Hale, 1982; King, Akua & Russell, 2013;

Martin, 2009), and protect Black children from the negative image of themselves due to internalized stereotypes (King, Akua & Russell, 2013; Jones, 2000) as well as the maladaptive responses that children may develop in response to racism and stereotypes (Ogbu, 2004; Steele, 1997). Consistent with research (Cholewa et al., 2012; Neff et al. 2005; Oyserman et al., 2006; Parson, 2008), we have found that the application of the root construct leads to following competences, which in turn promote higher performance.

Questing competence: Methods that motivate students' learning within and outside classroom settings through the cultivation of the following attributes; self-confidence, and academic self-efficacy, which piques students' openness to new areas of inquiry; learning orientation, which promotes students' commitment to analytical thinking in all areas of inquiry; and self-reliance, which increases students' resistance to peer pressures against studious investment.

Emotional competence: Enhanced levels of self-persistence, self-esteem and emotional resilience—the capacity to manage and overcome obstacles and adversities common to many Black students living in urban school districts.

Social competence: Increased display of love, respect, and interpersonal skills, established through a culture of positive social regard that supports commitment to academic excellence across contexts—home, peers, churches, communities and school.

Table 1 provides a summary of the association between questing, emotional, and social competencies and levels of achievement on standardized measures of math and reading achievement in a sample of 72 second and third grade students attending an all-Black inner-city elementary school. In the first row and column of Table 1 (Taylor & Kouyatè, 2003), the point 2.5 indicates that students rated above median on love and respect were two and half times more likely to score at or above the national average in math than students rated below median six

months later. The second number 7.0 means that students rated above median on love and respect were seven times more likely to score at or above the national average in reading than students rated below median on love and respect. In general, students rated as above median on these values were at least 2.5 more likely to score at or above average on math and reading achievements than students rated below median on these values. They suggest that these values maybe foundational to any dedicated reform to accelerate the closure of racial achievement gaps (Taylor, 2006b).

Environment (Context)

From the ecological perspective (Bronfenbrenner, 1979; Hughes et al., 2016), we argue that parents, peers, churches and neighborhoods, and schools are significant learning ecologies that influence African American children's development. AGM contends that children's educational success is the result of continuous investment in, and engagement of each of these variables (Diamond & Gomez, 2004; Jordan & Wilson, 2015; Reed & Swaminathan, 2014). Reed and Swaminathan (2014), and Harper (2015) document findings that define urban students and their families in terms of the risks that characterize them, and suggest low academic involvement. With this perception, many urban educators seem to doubt the educability of the urban students, many of whom are Black (Lipman, 1998). However, evidence suggests that while many low income and working Black parents in urban cities are interested in transforming the quality of education to help their children succeed, they feel unwelcomed by the school (Diamond & Gomez, 2004).

Given that most neighborhoods in urban cities offer limited opportunities that support students' academic possible selves (Oyserman et al., 2006; Pattillo, 2013) coupled with the failure of macro level policies to respond to the myriad of challenges that urban students face, school partnership that identify and engage parents, churches, and justice minded communities

are vital to the achievement and maintenance of educational justice for Black students in urban education (Brown et al., 2016; Jordan & Wilson, 2015; Reed & Swaminathan, 2014; Walker, 2000). Preliminary findings from the application of AGM suggest that for this partnership to be effective, the following recommendations are needed; (1) school implement plans to promote excellence in academic engagement and achievement outcomes with parents, peers, churches, and neighborhoods; (2) school monitors the extent to which these stakeholders are implementing the plan; (3) school recognizes and celebrates collaborators implementing the plan; (4) community implements plan that holds schools and school districts accountable; and (5) community recognizes and celebrates schools that are successfully accelerating the closure of racial achievement gaps.

Gardener (Teacher)

With the expectations that all seeds planted will bloom, the gardener brings dedicated affection and love. Gardeners thus, develop and apply an intimate knowledge and skills to ensure the growth of all plants, *i.e.*, a conceptual knowledge of soil, seed, root, and environment and a practical knowledge of how to link these systems to maximize growth. The gardener is a metaphorical stand-in for personal and professional skills, knowledge, and attributes of teachers that are key to educational justice for Black students. Teachers strongly influence students' self-concept and learning identities, motivation, and goals (Carter, 2005; Duncan-Andrade, 2009; Wallace & Chhuon, 2014). Urban classroom teachers are effective when they capitalize on the resources and assets of their students and communities to co-construct teaching and learning (Hipolito-Delgado & Zion, 2017; Wallace & Chhuon, 2014; Varelas et al., 2013). Research has noted that such teaching practices contribute to students', those at risk for disengagement in particular, intrinsic motivation to achieve, learning orientation, help seeking behaviors, and better performance because they feel recognized,

accepted, and supported (Boucher, 2014; Cholewa et al., 2012; Wallace & Chhuon, 2014).

Consistent with research and our preliminary findings, we recommend teachers to; (1) develop a caring and authentic relationship with their African American students to better understand them and their learning needs, and structure instructional practices accordingly (Davis et al., 2014); 2) believe that with effort through caring relationship, they can get through with even the most difficult or unmotivated student (Boucher, 2014; Cholewa et al., 2012; Duncan-Andrade, 2009); (3) promote and sustain high expectations for students in their classrooms; (4) structure the classrooms in ways that lead to developmental alliances by learning from students, and using what is learned to inform instructional practices (Wallace & Chhuon, 2014); (5) engage in practices that foster parent, peer, church, organization, and neighborhood norms that support academic excellence (King, Akua & Russell, 2013).

Gardener Support and training (Administration)

Gardener support refers to the knowledge, skills and resources that help the gardener to be effective. For example, opportunities to affiliate with a community of gardeners with records of documented success, and how to identify and implement methods and practices for glorious bloom. Under AGM, the gardener support refers to the training and support that teachers receive for effective teaching of African American students, particularly, in urban education classroom. Findings from initial application of AGM, which are noted in the literature, suggest that educators' ability to see themselves as part of the community in which they work is critical to develop and engage in equity minded principles and practices for justice attainment (McCullough, & Ryan, 2014; Theoharis, 2010). Specifically, teacher training, and professional development activities that prepare teachers to develop and strengthen their social justice orientation to understand and critique inequalities embedded in urban educations, and the role that they can play to change or perpetuate those inequalities are central to Black student's

achievement (Lomotey & Lowery, 2013; McCullough, & Ryan, 2014; Martin, 2009). Strong partnership with universities and urban communities that allow the integration of theory, research, and experiential knowledge is promising for increasing educators' connection with communities, families and children to enhance students' engagement—key mechanism for effective teaching and learning— (McCullough, & Ryan, 2014; Swindler Boutte & Johnson, 2013; Wallace & Chhuon, 2014). Moreover, social justice orientation of principals and school leaders are key components to ensure that teachers have the adequate skills and support to be effective in the classrooms (Lomotey & Lowery, 2013; McCullough, & Ryan, 2014; Reed, & Swaminathan, 2014; Theoharis, 2010). Effective leaders in education have fair assessment of the educational context, are committed to institutional diversity and collaboration, focus on rigorous course content and purposeful selection of teacher candidates (McCullough, & Ryan, 2014; Theoharis, 2010), and carefully link practices to their specified mission and goals (Brown et al., 2016). Additionally, as noted (Lomotey & Lowery, 2013), AGM contends that successful educational leaders of Black students are central to teachers' effectiveness in urban education context. Principals hope in students positions them to facilitate and demonstrate confidence in the students, commitment to their success, compassion to them and their families, which in turn enable them to demand the same from their teachers (Lomotey & Lowery, 2013).

We recommend that for educators to be effective with their African American students, there is the need for explicit focus on contextually driven factors in the educational settings they expect to teach in their training and professional development activities. Additionally, leadership should encourage shared aims, shared assessment tools, active collaboration, shared instructional strategies, routine public inspection and peer accountability among teachers (Raudenbush, 2009). Furthermore, it is important for educators to see themselves as part of the

community and engage community resources for transformational education that leads to social justice (McCullough, & Ryan, 2014; Theoharis, 2010).

Summary of the AGM Constructs

Overall, AGM is grounded on the premise that belief in Black children in urban education classrooms as intellectually capable, powerfully propels educators and caregivers to take specific actions that ensure the realization of such belief (i.e. high expectation). While we are cautious in speculating the potential of the AGM, we believe that its application in the urban education field can lead to critical steps, processes, and actions toward educational justice that meet the four As—availability, accessibility, acceptability, and adaptability—specified by the right to education project (Melchiorre & Atkins, 2011) to secure educational justice not only for African American children, but for every child in seemingly unjust places. Although the constructs appear distinct from one another, they are highly interrelated. In the next section, we examine our initial methods for auditing AGM in any given context.

Assessing the Achievement Gap Closing Potential of AGM

In developing AGM to formalize our conception of dedicated reforms for Black students, we have provided a series of standards that we believe will accelerate the closure of racial achievement gaps. In this section, we examine methods for auditing classrooms, schools, and educational programs in general using AGM. Then we illustrate the application of these methods on a school that reversed racial achievement gap. We conclude with an interpretive summary of these applications of AGM methods. In completing educational audits using AGM constructs, five critical decisions and operations are entailed.

Evaluation context: We argue that AGM can be applied to evaluate various contexts that are intended to educate Black children in ways that close racial achievement gap. Thus, evaluation context can be but not limited to a classroom, overall school environment, after-

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school program, a ‘best practice’ reform, and instructional and pedagogical policies and practices of gardener schools—schools of education or the professional development offerings of school districts.

Type and source of data: AGM can be utilized to analyze data that maybe based on *prescriptive narrative* which details how the reform should be implemented, *behavioral observations* which provide external evaluation of how the reform is implemented, *informant perceptions* which feature internal evaluation of how the reform is implemented, or *self-reports or interviews* with key informants such as principals or teachers.

Identify period covered by rating: Indicate whether the period of activities rated cover the last month, the last grading period, the last year, or some other specified time interval.

Follow recommended rating procedures: In rating prescriptive narratives, informant perceptions, and self-reports or interviews from teachers, students, parents, school and community leaders, we recommend the following instructions: Participants are asked to *read each of the following items carefully and objectively. Then rate the extent to which behaviors described in each statement match instructional or administrative behaviors in your (classroom and school; after-school program, and so on) during the period of observation identified:*

Responses are scaled according to: *NEVER (0), RARELY (1), SOMETIMES (2), FREQUENTLY (3), ROUTINELY (4)*. On the continuum 0 to 4. The rater records the extent to which policies or practices referenced in each item are implemented. For behavioral observations, identify the domains of performance, and the specific policy and practice items attached to these domains to generate frequency counts in relation to each component of AGM.

A score is generated by the sum of the items, which is then divided by the maximum of 20 for each component and multiplied by 100 to estimate percentage of educational justice attainment for each component. For example, if the sum for the component Soil is 16 points in relation to

the maximum possible of 20 points for that component, the percentage attainment would be estimated as $(16/20) \times 100 = 80^1$. Using the percentage calculated from AGM components, we propose a quantitative index of justice potential J_k : the capacity of reform k to close racial achievement gaps in classrooms, schools, after-schools or any other context that may be identified for evaluation. In addition, we propose that index J_k could be used to evaluate the extent to which higher learning institution k or school district k is preparing, and supporting teachers and administrators to accelerate the closure of racial achievement gaps.

AGM Audit of a Public School that Reversed Racial Achievement Gaps

Below, we provide an analysis of approaches and practices in a particular school where AGM was applied to evaluate racial gap closing potential in reading and mathematics. We intentionally selected this highly successful school to evaluate its performance on AGM standards because of its urbanistic characteristics, with 99 percent of the students being Black, and from low income families (Chenoweth, 2006).

In 2006, M. Hall Stanton was a high-poverty, high-achieving, all-Black elementary school located in an economically impoverished area in North Philadelphia, Pennsylvania (Education Trust, 2015). Stanton had not always been a high-achieving school. In 2002, students' proficiency levels in reading and math on the state assessment test were 13 and 20 percent, respectively. Under the leadership of new Principal Barbara Adderley, proficiency levels of reading and math dramatically accelerated to 73 and 84 percent, respectively, in 2005. Indeed, in 2005 the percent proficient in reading and math at Stanton exceeded the percent proficient at both city and state levels, i.e., racial achievement gaps were reversed in the disciplines of math and reading. Subsequently, Stanton was recognized as the "dispelling the myth school" (Education Trust, 2015). Thus, the school that was on the verge of being closed

¹ In subsequent work, we will use standard scores to supplement percentage estimates.

down was turned around, defying the odds that defined it (cracks, gangsters, shootings and killings in the neighborhood, and poverty) (Education Trust, 2015). Based on observations and interviews conducted in October 2004 and October 2005 by Karin Chenoweth (2006), a team of two evaluators were able to rate AGM items on this turnaround elementary school. The vetting method described under rating procedure was used to evaluate composite descriptions provided by Chenoweth (2006).

Results indicate higher elevations on Seed (100) and Gardner (90) components, high elevations on Root (80), Soil (80), and Gardener Support (80) components, and lowest elevation on the Environment (30) component. The overall justice potential J_k was estimated to be at 74 or 26 points below the maximum 100. Based on AGM, we suggest that interventions that strongly address *environment* primarily, and some supplementary focus on *root*, *soil*, and *gardener support* components might be important in consolidating and enhancing annual achievement gains of Black students who attend this turnaround elementary school.

AGM Performance Audits: Interpretive Summary on Racial Gap Reversals

Figure 2 provides a summary of AGM audits for Stanton Elementary in the 2004-2006 academic. Inspection of figure 3 indicate that the evaluators rated the seed (*curriculum*) to be at 100 percent per AGM standard. Although there was no examination of causal link, the 100 percent on the seed, which reflect the introduction of rigorous curriculum suggests that while the urban contexts that many Black children live in may have a negative effect on their educational opportunities, they do not suggest lack of ability on the part of the children. The evaluators also found the gardener to be at very high percentage (90) on the AGM standard. As noted the Principal and the teachers had a thorough assessment of the needs of the students, and their abilities, and organized instructional practices and approaches in ways that every student was attended to (Chenoweth, 2006). Per the seed, soil, and the gardener metaphors, the teachers

at Stanton demonstrated critical hope in and to their students (Duncan-Andrade, 2009). As argued by some scholars (Duncan-Andrade, 2009; Frankl, 1984), a key element inherent in such critical hope is love, which establishes trust between teachers and students, and positions teachers to bring out the untapped potentials that may have been overshadowed by the environmental context within which children operate. It suggests Stanton's strong focus on rigorous curriculum was grounded in an intimate knowledge and understanding of the students' potential, their social ecology, and needs. Additionally, the rigorous curriculum was introduced to students within the context of caring, and supportive relationship (Delpit, 2003; Wallace & Chhuon, 2014).

Furthermore, Stanton Elementary was rated 80 on the soil, root, and gardener support. It suggests that to a high degree, the Principal was instrumental to the teachers' strong focus on rigor, their instructional and pedagogical approaches, and the supportive emotional climate within which curriculum was delivered. Consistent with research the finding about the gardener support underscores the importance of leadership in urban education in facilitating and sustaining school culture that leads to equity-based excellence (Chenoweth, 2006; Lomotey & Lowery, 2013; McCullough, & Ryan, 2014; Theoharis, 2010). It was also revealed that the curriculum connected students to their lived experiences, particularly, their social identity and helped students to regard themselves as change agents in the community (Delpit, 2003; Hipolito-Delgado & Zion, 2017; King, Akua & Russell, 2012).

However, the vetting revealed that Stanton Elementary had very low percentage score (30%) on the environment component. It thus suggests that all the resources that constitute the learning ecology of the students were not fully utilized, in particular, community and family involvement in the reform that Stanton embarked on under Principal Babara. This could potentially shed light on why Stanton Elementary performance quickly decline after the

departure of the Principal (Education Trust, 2015). Conceivably, it can be suggested that while the leadership is critically important for achieving educational justice in urban schools, justice may have a short life span without the full involvement and cooperation of the community and families in ways that are collaborative as well as culturally and contextually sensitive (Boutte & Johnson, 2013).

In general, we believe churches as primary gatekeepers in Black communities provide political voice and creative advocacy that demand and sustain educational excellence in neighborhood schools (Jordan & Wilson, 2015; McCray, Grant, & Beachum, 2010). Given that superintendents, principals, teachers, staff, curriculum, and board members come and go, who remains to broker policies and practices that affirm the best interest of children if not community gatekeepers? Who will insist on continuities in excellence amidst the vicissitudes of district-wide changes if not community gatekeepers? Who will insist on changes for the better if not community gatekeepers? Where school leaders and staff are doing commendably well in closing racial achievement gaps, who may be better to sing their praise than community gatekeepers? Where schools with histories of accomplished learning have faltered or fallen, who will step to the plate as guarantors of excellence if not our community gatekeepers? Without the attentive, nourishing, and challenging embracement by gatekeepers, we speculate that educational excellence may be attained but may not be sustained.

We acknowledge that justice potential estimates of 74 (Stanton) may seem unusually low for practices that have reversed racial achievement gaps. There are three possibilities that must be explored. First, the estimate may be too low because ratings of '0' are assigned if narrative descriptions or school observations do not mention the content being rated. This would not mean necessarily that the content is absent, only that it is not reported. Focused observations or structured interviews may be helpful in correcting this problem. Second, the

estimates are based on raw percentage, and may be too low for purposes of interpretation, in which case we would shift to using standard scores rather than raw scores in estimating justice potential and its components. Third, it is possible that our justice estimates are about right with or without the use of standard scores. Whatever the metric used, it is our expectation that future research will reveal whether AGM audits can be used *diagnostically* to identify how existing educational reforms can be supplemented to accelerate the closure of racial achievement gaps or *prognostically* to estimate the racial gap closing potential of particular educational reform and practice. Our hope is that results of such studies will lead to a general science of acceleration applicable to students of any race, ethnicity, class, or gender. Based on our relatively undistinguished ranking on international assessments of achievement, such results would have salutary implications for the nation.

Implication for Research and Practice

Overall, the AGM framework adds to the emerging body of research on what could be done (Chenoweth, 2006; Delpit, 2003; Duncan-Andrade, 2009; Lomotey & Lowery, 2013; McCullough, & Ryan, 2014; Theoharis, 2010) to close racial gaps in educational opportunities that are disproportionately distributed among Black children. It argues that despite the deficits characterization of these children and their contexts, resources exist in the students and their communities that can be identified and nurtured for success (Harper, 2015) with practices similar to the gardener. Additionally, AGM adds to the emerging evidence that indicates that efforts to identify and specify how to achieve and maintain educational justice with specific reference to Black children should: (1) thoroughly assess and identify the unique needs of students that take into account their sociocultural, economic and political context, and structure instructions accordingly (Chenoweth, 2006; Delpit, 2003; Perry et al., 2003) (2) introduce rigorous curriculum to students within loving and supportive context (Duncan-Andrade, 2009); (3)

connect education, and its importance, to students' cultural and racial identities (Delpit, 2003; Hipolito-Delgado & Zion, 2017; King, Akua & Russell, 2013) (4) establish effective school, family, and community collaboration that is contextually and culturally responsive (Boutte & Johnson, 2013); (5) ensure that teachers love and are loved by their students (Duncan-Andrade, 2009); and (6) ensure principals are equity minded leaders, who can demonstrate, and facilitate the relevant knowledge, skills, and resources that develop and strengthen their social justice orientation for effective teaching (Lomoter & Lowery, 2013).

As suggested from the analysis of Stanton Elementary case, community and family involvement is indispensable for achieving and maintaining equity-based academic excellence for Black children. Consistent with research (Boutte & Johnson, 2013), community and family engagement for the educational success of Black children in urban school context need to be strength-based, transcends the traditional approaches to engagement where the school instruct families, to a more responsive approaches that recognize communities and families as partners. One key community player that need specific focus to fully leverage the resources for the performance of Black children in the urban context is the Black church.

In rounding up, we recognize that AGM is an evolving framework. Caution is therefore needed not to overestimate the potential benefits of this framework. There is a need for more research using this framework to validate, strengthen or modify it in ways that achieve educational justice for all children, African American children in urban education in particular.

Conclusion

Despite the limitation, we reiterate that sustaining call to justice cannot be the singular responsibility of policymakers nor educators or families. We need to identify and employ the nation's most informed, courageous, and innovative leadership in strategic political alliance at every level of engagement. Actions of this alliance must not be delayed, must be intentional in

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acknowledging and encouraging Black scholars, leaders, activists, pastors, and agency directors whose voices are critical in igniting and sustaining the sense of urgency in closing racial achievement gaps within their communities. As echoed by Dubois (1980), *we must realize that;*

Now is the accepted time, not tomorrow, not some more convenient season. It is today that our best work can be done and not some future day or future year. It is today that we fit ourselves for the greater usefulness of tomorrow. Today is the seed time, now are the hours of work, and tomorrow comes the harvest... (page 36).

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Figure 1.

Trend in Reducing Reading Achievement Gaps Between Black and Whites

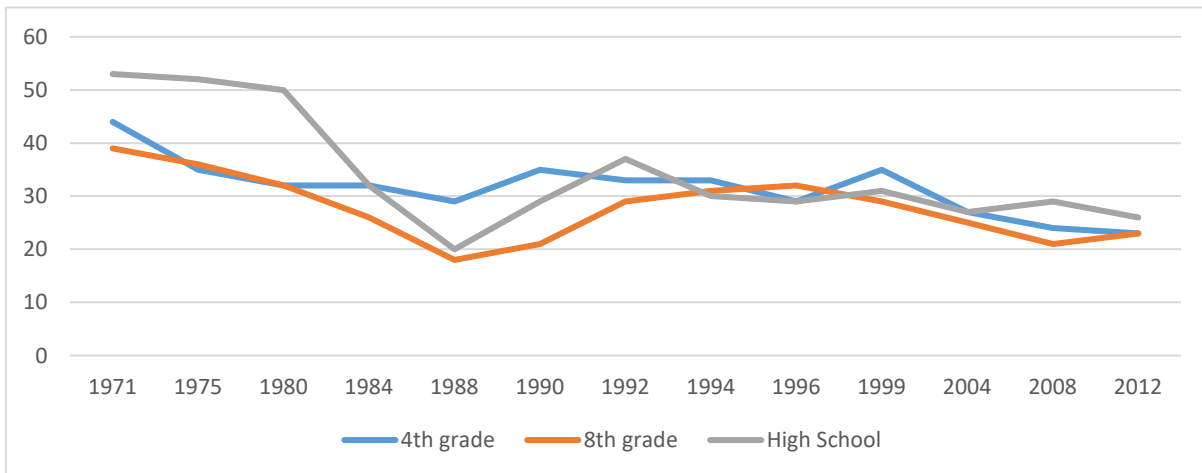
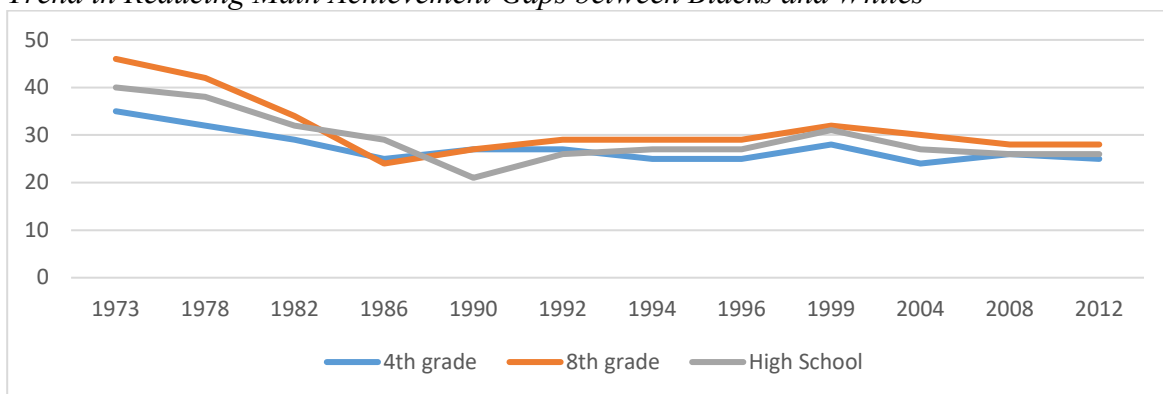


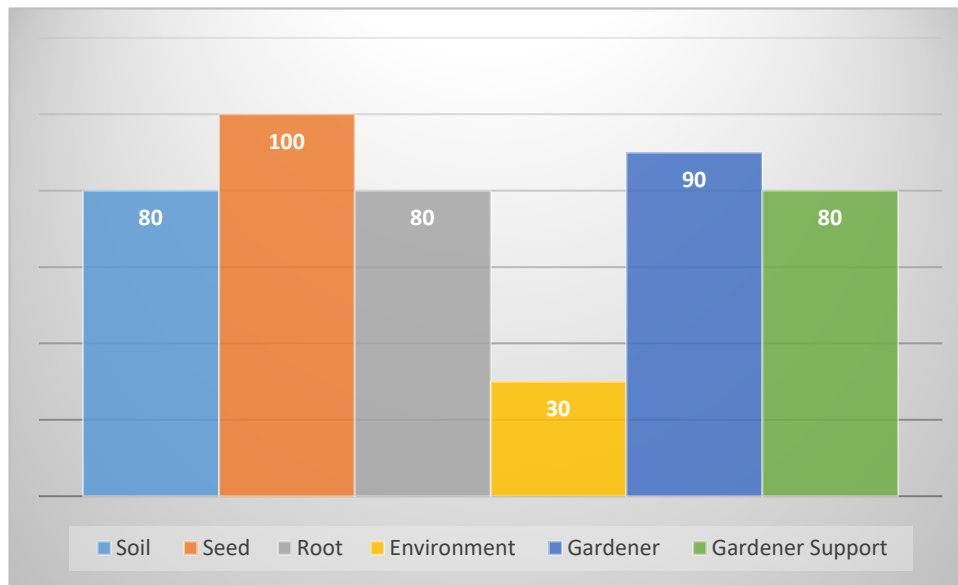
Figure 2.

Trend in Reducing Math Achievement Gaps between Blacks and Whites



Source: NAEP, 2013

Figure 3: Percentage of Educational Justice Attainment on AGM Standards by Stanton Elementary



Note: Reforms that reversed the pattern of racial achievement gaps come and go, who remains to broker policies and practices that affirm the best interest of children if not community gatekeepers? Who will insist on continuities in excellence if not community gatekeepers?

Table 1: Odds ratios describing the relationship between teacher ratings of students' behavioral expression of seven values and students' performance six months later on standardized measures of Math, Iowa Test of Basic Skills (ITBS) and Reading (Stanford 9)

Values	ITBS:Math	SAT: Reading
Love and Respect	2.5	7.0
Interpersonal Skills	3.5	28.0
Learning	2.5	>6.0
Orientation		
Self-Confidence	2.5	7.0
Self-Persistence	8.0	2.5

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Self-Esteem	5.3	7.0
Self-Reliance	8.0	2.5